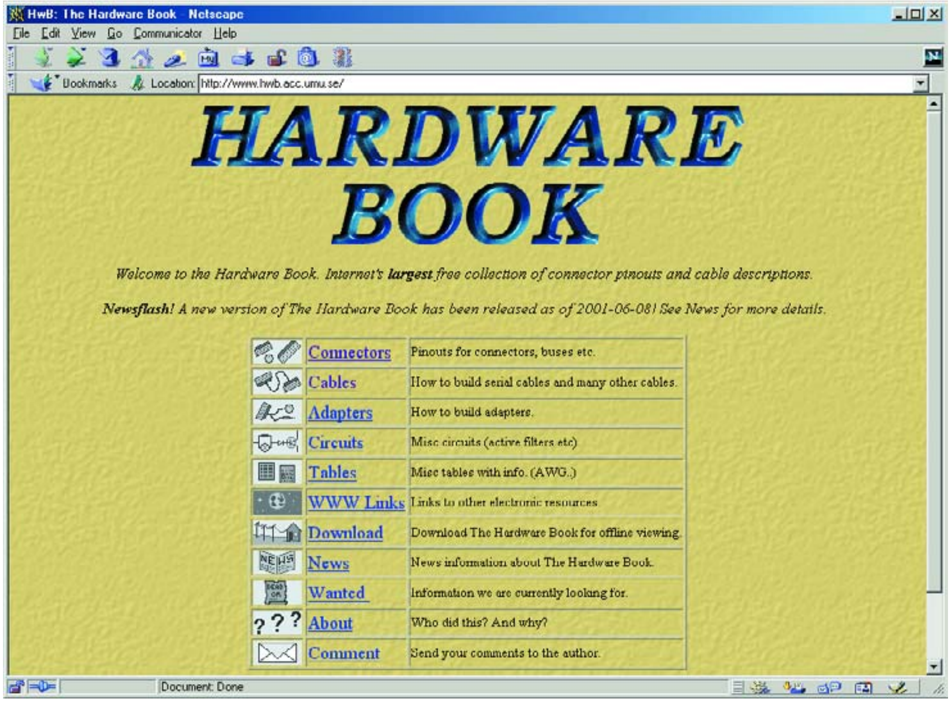
Connector Data, Please

Connectors, cables & Co.

By Harry Baggen

Communication has become a key aspect of modern society, and the term covers not only communication between people, but also electrical and electronic equipment. In most instances, data exchange is effected via cables and connectors. Fair enough, but as technology progresses, so many different connectors and standards have evolved that it has become difficult to tell them all apart, not even mentioning recognising the shape, functions and pin-outs.

Connector data is indispensable if you want (or need) to make your own connecting cable, or design a circuit that's to be hooked up to some other piece of equipment. In that case, it's not only essential to know which signals ought to be on the connector pins, but also their level and function. Are you dealing with an analogue or a digital signal? What is the 'swing' of the digital signal, or, in the case of an analogue signal, what is its impedance and typical level?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HARDWARE BOOK
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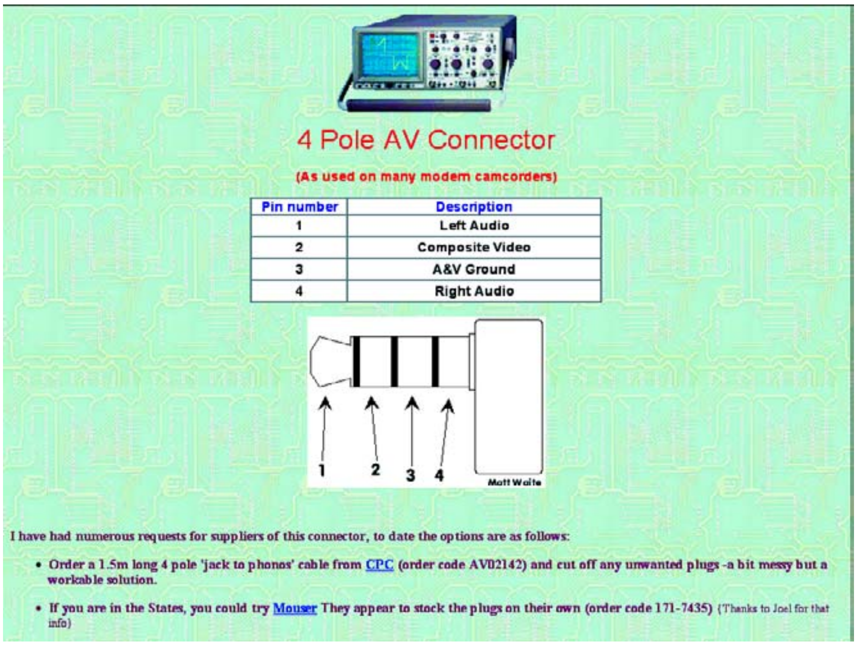
Welcome to the Hardware Book. Internet's ***largest*** *free collection of connector pinouts and cable descriptions.*

Newsflash! *A new version of The Hardware Book has been released as of 2001-06-08! See News for more details.*

	Connectors	Pinouts for connectors, buses etc.
	Cables	How to build serial cables and many other cables.
	Adapters	How to build adapters.
	Circuits	Misc circuits (active filters etc)
	Tables	Misc tables with info. (AWG.)
	WWW Links	Links to other electronic resources
	Download	Download The Hardware Book for offline viewing.
	News	News information about The Hardware Book.
	Wanted	Information we are currently looking for.
? ? ?	About	Who did this? And why?
	Comment	Send your comments to the author.

Fully aware of the bewildering number of connectors and standards around in today's confused electronics scene, finding the right data may well present a bigger problem than actually buying, using and wiring the connector in question!

Time to call in the help of the Library of Libraries: The Internet. An excellent starting point on the web, we found, is **The Hardware Book** [1], which claims to be the largest freely accessible Internet database covering connector pinouts and cable data. As far as we have been able to ascertain, the claim is justified! The connector pages are conveniently divided into categories including Audio/video, buses, cartridges, extension connectors, tele-



4 Pole AV Connector

(As used on many modern camcorders)

Pin number	Description
1	Left Audio
2	Composite Video
3	A&V Ground
4	Right Audio

I have had numerous requests for suppliers of this connector, to date the options are as follows:

- Order a 1.5m long 4 pole 'jack to phonos' cable from CPC (order code AV02142) and cut off any unwanted plugs -a bit messy but a workable solution.
- If you are in the States, you could try Mouser They appear to stock the plugs on their own (order code 171-7435) (Thanks to Joel for that info)

phony, networks, serial data links, Centronics, mouse, keyboard, IDE, SCI, power supplies. The ‘cable’ section is likewise divided into categories, although the larger part describes computer cabling. The Hardware Book is also immensely useful as a connector data archive for vintage home computers like the Commodore C64, Sinclair Spectrum, Atari, etc. A big asset of the Hardware Book is the fact that the entire ‘book’ is available for downloading, allowing users to have a complete ‘cable & connector’ overview instantly available on the computer.

The German **Elektron-BBS** [2] is a pretty extensive website covering lots of subjects including electronics. The site holds a generous amount of cable and connector data, divided into categories like audio, computer, RF, modelling, telecommunications and video. However, it is judicious to jump straight to the contents page [3] and from there surf to the desired subject. The site will be particularly valued for its data on car connectors and R/C model equipment like servos and ancillaries.

Another website we can recommend is **Kabelmax** [4]. Like the Elektron-BBS, the site is mostly in German, but that should not distract from its usefulness if you are after an elusive connector pinout! Remarkably, the site also contains quite a few circuit diagrams of typically used level-converter circuits (like MIDI-TTL and RS232-TTL). Although the diagrams have been drawn rather crudely (using ASCII symbols), they are still decipherable, while the various tables also provide useful information. Unfortunately, the data on telephone connectors (called TAE) is specific to the German telecommunications market. Some attention is also given to the maximum length of certain types of cable.

In really difficult (i.e. specialist) cases, where only the name of the cable or connector manufacturer is known, the manufacturer’s address may be found using Google, entering the manufacturers’ name, the word ‘connector’ and ‘address’ to narroe down the search results (which may still come in by he thousands).

Other useful web pages, containing, or linking to, very good drawings for audio and video cables and associated connectors, are supplied by **Educypedia** (Educational Encyclopaedia) [5]. The website has much other information to offer on the hobby and is a good point to completely lose yourself in *surfin’ for electronics, science & IT* on the web!

The **Connectivity Platform** [6] supplies a condensed but clearly organised overview of the majority of digital connections and connectors including serial and parallel links, LAN, WAN and telecomms links. In quite a few case, you are linked to other websites where supplementary information may be found.

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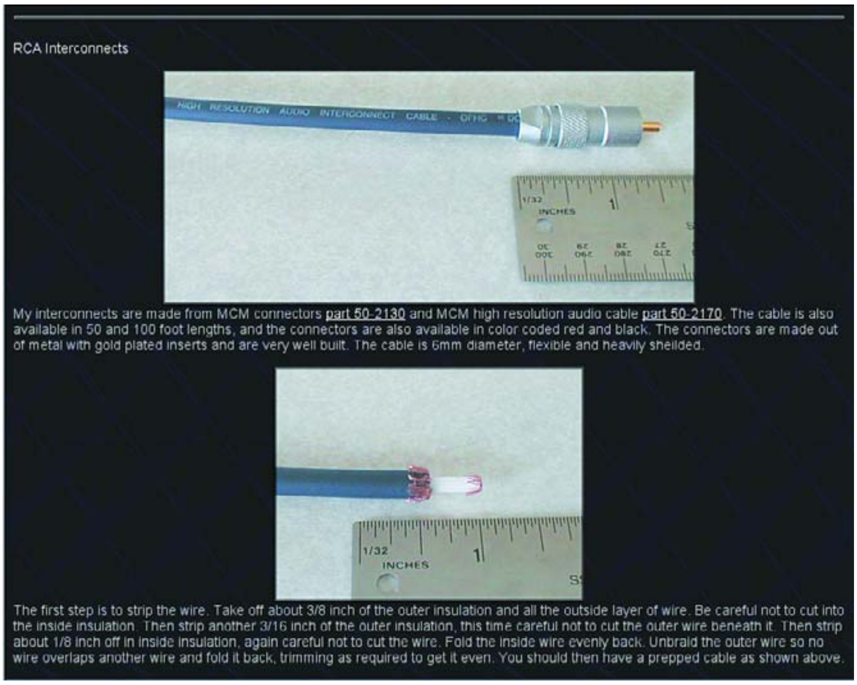

RCA Interconnects

My interconnects are made from MCM connectors part 50-2130 and MCM high resolution audio cable part 50-2170. The cable is also available in 50 and 100 foot lengths, and the connectors are also available in color coded red and black. The connectors are made out of metal with gold plated inserts and are very well built. The cable is 6mm diameter, flexible and heavily sheilded.

The first step is to strip the wire. Take off about 3/8 inch of the outer insulation and all the outside layer of wire. Be careful not to cut into the inside insulation. Then strip another 3/16 inch of the outer insulation, this time careful not to cut the outer wire beneath it. Then strip about 1/8 inch off in inside insulation, again careful not to cut the wire. Fold the inside wire evenly back. Unbraid the outer wire so no wire overlaps another wire and fold it back, trimming as required to get it even. You should then have a prepped cable as shown above.

Internet Addresses

[1] The Hardware Book: *www.hwb.acc.umu.se/* complete download:
www.fbe.fh-frankfurt.de/personal/schellhaas/hwb/hwb.htm
[2] Elektron-BBS: *www.elektron-bbs.de/elektronik/kabel/index.htm*
[3] Contents page: *www.elektron-bbs.de/elektronik/kabel/inhalt.htm*
[4] Kabelmax: *www.kabelmax.de*
[5] Educypedia: *http://users.pandora.be/educypedia/electronics/cablingaudio.htm*
[6] Connectivity Knowledge Platform: *http://ckp.made-it.com/*